



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,123	08/25/2003	Eran Dvir	25667	9834
20529	7590	07/07/2006	EXAMINER	
NATH & ASSOCIATES 112 South West Street Alexandria, VA 22314				PILKINGTON, JAMES
			ART UNIT	PAPER NUMBER
			3682	

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/647,123	DVIR ET AL.	
	Examiner James Pilkington	Art Unit 3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 17 February 2005.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-26 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-26 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 25 August 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/25/03 &amp; 11/21/03</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, "the clamping rings" (clm 11) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.
2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 11, the spring arrangement.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the inner assembly attached to the support stage assembly, and said outer assembly is driven for movement (clm 4) must be shown or the feature(s) canceled from the claim(s). Also, the bottom of the inner assembly attached to membrane-like member M2 (clm 9) must be shown or the feature canceled from the claim. The figures appear to be showing that bottom of the inner assembly is not attached to the membrane; Figure 1A shows the inner assembly extending past member M2. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure

is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

4. The disclosure is objected to because of the following informalities: all figures must have their own brief description. Therefore, figures 1A, 1B, 4A and 4B must have their OWN brief description.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
6. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-26, the phrases "membrane-like," "pin-like," and "disk-like" renders the claim(s) indefinite because it is unclear as to how much like a membrane, a pin or a disk the structural elements are.

Regarding claims 1, 20, 24, 25 and 26, it is unclear to the examiner what is meant by a spring suspension with the first and second assemblies arranged in a coaxial relationship one inside the other. As currently stated it appears as if the applicant is claiming that one spring element is arranged inside the other sharing a common axis (coaxial), in other words the claims sound as if there is a larger spring with a smaller spring in the center. Or does the applicant mean that there is multiple outer springs (14A) arranged around the outer edge of the stage and the second spring is disposed inside the circle formed by the multiple outer springs?

Regarding claims 1, 20, 24, 25 and 26, it is also unclear to the examiner as to what is truly a spring in the spring suspension assembly. As currently claimed it appears to the examiner that the applicant is claiming that 14A and 14B are springs. The specification states that the assembly of 14A is made of 3 struts N1-N3 so is 14A really a spring or is it a strut? Or is the spring member 14A arranged around the struts? Or is it the membrane-like member that acts as a spring? Is member 14A more like a compression ring that circles the base as shown in Figure 2? Or is 14A merely a support structure for the suspension assembly and 14B is the only true spring? And if 14B is a spring wouldn't it compress upon the moving of the wedge member and not cause a change in the vertical height of the platform?

The term "substantially the same height" in claim 7 and "substantially annular geometry" in claim 10 are relative terms which renders the claims indefinite. The terms "substantially the same height" and "substantially annular geometry" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. How substantial does the structure need to be?

Claim 19 recites the limitation "the wedge element" in line 3. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1-8, 15, 18 and 19, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Horikawa et al, USP 5,991,005.

Re clm 1, Horikawa discloses a system for controlling an axial movement of an article comprising:

- A support stage assembly (22)
- A spring suspension arrangement (23) mounted on said support assembly (22) comprising
  - First (50) and second (41/42) assemblies
  - An article-carrying member (24)

- o First and second membrane-like members (60)

Re clm 2, a drive assembly (36).

Re clm 3, the outer assembly (50) is attached to the support stage (210) and said inner (41/42) assembly is driven for movement along said axis.

Re clm 4, Horikawa discloses that the outer assembly can be driven for movement (720 and 740 in Figure 12 are drive units).

Re clm 5, the outer assembly is composed of at least three space apart pin-like members (50) and the inner assembly (41/42) is composed of at least one pin-like member (43)

Re clm 6, the arrangement of the at least three fixed members (50) of the outer assembly defines a regular polygon, and the pin-like member of the inner assembly (43) is located substantially at the center of the polygon.

Re clm 7, the outer and inner assemblies have substantially the same height.

Re clm 8, the outer and inner assemblies are configured as cylinders or prisms.

Re clm 15, the support stage assembly (22) is driven for movement in a plane perpendicular to said axis (can move in grooves 21a, 21b).

Re clm 18, the article-carrying member (24) is mounted on a central axis of said assembly by means of a pair of spherical washers (24a and mating surface above 24a) facing each other by their male and female surfaces, respectively, thereby enabling precise positioning of the article-carrying member (24) in a plane perpendicular to said axis.

Re clm 19, the drive assembly comprises a mechanical pair formed by a roller bearing (40) mounted on a tapered surface of the wedge element (37); and a motor (39) operable for moving the wedge element (37).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Harikawa '005 in view of Byrnes, USP 5,150.040.

Harikawa discloses all of the claimed subject matter as described above.

Harikawa does not disclose the article-carrying member mounted on the second assembly for rotation.

Byrnes teaches a positioning device in which the article carrying member (23) is mounted on the second assembly (39) for rotation for the purpose of providing a device that is suitable for positioning of semiconductor wafers during testing (C1/L8-10).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the teachings of Harikawa and provide for the article carrying member mounted on the second assembly to be capable of rotation, as taught by Byrnes, for the purpose of providing a device that is suitable for positioning of semiconductor wafers during testing.

Re clm 16, Harikawa discloses that the support stage (22) is driven for movement in a plane perpendicular to the z-axis.

Re clm 17, the device used for transferring and positioning of a disk-like article with respect to said axis, wherein the support stage assembly (22) is movable along a perpendicular axis for a distance of at least a radius of the article. It is noted that this claim is being viewed as an intended use claim.

***Allowable Subject Matter***

11. Claim 9 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. Also, claims 9-13 are objected to as being dependent from rejected claims.

12. Claims 20 - 26 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Pilkington whose telephone number is (571) 272-5052. The examiner can normally be reached on Monday-Friday 8:00AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JP  
JP  
6/26/06



RICHARD RIDLEY  
SUPERVISORY PATENT EXAMINER